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DISCUSSION ON THE PRECEDING PAPER

Brig. T. E. Osmond (the President) said that Dr. Harkness's paper had been very interesting and decidedly provocative.

Dr. **Hanschell** congratulated Dr. Harkness on the interesting and valuable information which he had put forward. It was a matter of great interest to learn that in the lesions which they had all seen, in which a sinus was discharging gonococci, a biopsy would show the sub-epithelial tissue to be actually infected with the gonococci. He had not looked for inclusion bodies in residual urethritis, but he agreed with Dr. Harkness that clinically the condition cleared up and was apparently cured by fever therapy. As to the keratodermia lesions, he had observed them in 1 out of 10,000 cases and, looking at the lesions which Dr. Harkness had presented so vividly, he thought that some of the penile lesions which he had allowed to pass, thinking that they were due to mechanical injury, were keratodermia lesions. He had seen the heaped-up, rather sodden epithelium; in places it seemed to be rubbed off. He had however concluded that the patient had been too vigorous and unwise in treating himself with antiseptics and the other remedies with which patients scrubbed themselves.

Lt.-col. **A. J. King** said that his first reaction to the title of this paper had been that it was a very limited subject, but Dr. Harkness had shown how wrong was such an assumption. He had given so much information that his hearers would be glad to have the opportunity of studying the paper at leisure.

There were one or two points of special interest. Lt.-col. King was surprised that keratodermia blennorrhagica was regarded as being such a rarity. Perhaps he was fortunate at Westbury in having a specially selected group of cases, but there was rarely a time in the wards when 2 or 3 cases of this condition could not be seen. Part of the general opinion as to the rarity of these cases was due to a fact which Dr. Harkness had emphasized, namely that these lesions were sometimes inconspicuous and that unless special search was made for them they were sometimes missed. They were present on the soles of the feet and might not grow to any size.

The condition which Dr. Harkness had described as circinate balanitis was perhaps the commonest manifestation of this particular syndrome, and was one which often was either missed or not interpreted in association with the general condition. It was a condition which he had seen fairly often. One of its characteristics was that, unlike the lesions on the skin, it often preceded the arthritis; in fact, more than once it had been possible to foretell the onset of metastatic lesions by noticing the presence of the balanitis.

Dr. **Harkness** asked whether or not penicillin was of any use in these cases. He had not used it very much, but in cases where it had been administered it had had no effect whatsoever.

Lt.-col. **King** said that many cases were transferred to his department for fever treatment and in recent months all had had penicillin, in amounts varying from 100,000 units to 1,000,000 units, without any further result than a temporary amelioration of symptoms.

Dr. **S. R. Brunauer** referred to the case of a young woman who showed an ulceration of the mouth, the discharge from which contained gonococci, and another case of a young man, in the group mentioned by Dr. Harkness, who complained of intense pain in the joints. His temperature rose to 104° F. and he had a rash consisting of small dark bluish-red papules, some of which were surrounded by a bright red area ; some were simple papules, some were vesicles and some showed necrosis in the centre. The blood cultures yielded a growth of gonococci and the gonococcal complement fixation test was positive and remained so for a considerable length of time—in fact for years afterwards.

Brig. **R. M. B. MacKenna** said that he had so enjoyed the paper that he felt it would be ungracious if he did not say so ; it had been most stimulating and highly provocative. So far as he could follow Dr. Harkness—and he agreed with Col. King that it would be important to study the paper—his classification of gonorrheal lesions of the skin was as follows. (1) Colliquative gonorrhoeal eruptions which occurred round the site of a gonorrhoeal abscess. (2) Direct infection of the skin, which, as Dr. Harkness had pointed out, occurred most commonly round the median raphe, and of which he had shown illustrations. Dr. Harkness had emphasized that the skin was usually resistant to gonoccoci and had pointed out that some of the lesions were very like those of recurrent herpes. Brig. MacKenna wondered whether some of these lesions were not secondarily infected herpetic lesions. (3) Toxic eruptions, which were stated in the literature to be erythematous, purpuric and so on, and which, as Dr. Harkness had pointed out, were usually manifestations of intolerance to drugs and were probably not gonorrhoeal in origin. (4) Sensitization eruptions, such as erythema nodosum. (5) Metastatic eruptions. (6) Virus conditions, which might or might not be associated with gonorrhoea. It seemed, therefore, that Dr. Harkness had subdivided gonorrhoeal eruptions into 6 different categories ; it was very valuable to have this classification.

He was much interested in Dr. Harkness's comparison between keratodermia blennorrhagica and pustular psoriasis, because pustular arthropathic psoriasis and keratodermia blennorrhagica had very much in common. Parakeratosis was a definite histological term having a very definite meaning. Did Dr. Harkness really mean that in keratodermia blennorrhagica the epithelial cells showed true parakeratosis ?

Dr. **Harkness** said that that was so.

Brig. **MacKenna** said that some time ago Fergusson and Lees had published a paper in which it was suggested that keratodermia blennorrhagica was not necessarily associated with gonorrhoea. Dr. Harkness had gone farther and said that it was a reaction associated with a virus infection. Brig. MacKenna would like to suggest that, in view of the similarity between keratodermia blennorrhagica and pustular psoriasis (and to a certain extent pustular arthropathic psoriasis), keratodermia blennorrhagica should be regarded as a "type of reaction" of the skin and not as a specific reaction.

Col. **L. W. Harrison** wished to make an addition to Dr. Harkness's cases of keratodermia blennorrhagica in which there was no evidence of gonorrhoea. He had seen in the Skin Department of St. Thomas's Hospital a case with skin lesions and polyarthritis, and he had no hesitation in saying that it was a typical case of keratodermia blennorrhagica, of which he had seen many. The patient had been transferred to Col. Harrison's own department and investigated thoroughly, but no evidence of a gonococcal infection was found.

Dr. **Doble** recalled that on one occasion he had diagnosed a case of keratodermia blennorrhagica before he saw it. A doctor had asked him to see a skin case and had said that the patient had corns on his feet where he should not have corns. The description was very suggestive of keratodermia blennorrhagica and that was what the patient's condition had proved to be.

Lt.-col. **R. Lees** congratulated Dr. Harkness on a very masterly survey of the subject and on the new conception of causation which he had put forward. He said that his own experience overseas had been that keratodermia blennorrhagica was now a very rare complication.

Lt.-col. Lees had participated many years ago in the experiments reported by David Lees and Percival, in which attempts were made to induce hyperkeratotic lesions in patients suffering from gonorrhoea, including some suffering from keratodermia blennorrhagica. Many different agents were injected into the skin, including vaccines of dead gonococci, living gonococci and "secondary" organisms. So far as he could recollect, the only successes were from inoculation of urethral discharge, taken from the urethra of a patient with keratodermia and injected intradermally into the trunk or limbs of the same patient.

He had treated with penicillin a few cases of keratodermia blennorrhagica complicating arthritis. The skin lesions had cleared up slowly, but not in a dramatic fashion, just as the joint condition had improved but not been cured by this treatment. Careful watch had been

kept, but no fresh skin lesions had developed during penicillin treatment or after it was stopped, and the established lesions appeared to have developed normally.

Air-cdre. **McElligott** said that he had seen more keratodermia in war-time than formerly. As often as not it was associated with non-specific urethritis, arthritis and metastatic conjunctivitis—the so-called Reiter's disease. The effect of the sulphonamides had been disappointing and hyperthermy had seemed to give the best results. He had not yet had an opportunity of trying penicillin in this condition.

Dr. C. **Hamilton Wilkie** said that he had seen quite a number of cases of hyperkeratosis, but he could recall one case, which might be of interest, of a young man whom he had seen some 10 years ago, and who then had urethritis, conjunctivitis and hyperkeratosis. Smears showed only a large Gram positive tetracoccus. That would not have been of any special interest but for the fact that he had retured 3 years ago with an exactly similar condition. The man had never had gonorrhoea. Dr. Wilkie had made many exhaustive tests and never found any evidence of a gonococcus. It might be of interest that on two occasions there was this large tetracoccus manifestation. He did not suggest that it was the cause, but it was present in association with the other conditions.

Dr. **Harkness** (in reply) agreed with Col. King that a parakeratotic balanitis was seen frequently in individuals suffering from acute polyarthritis, but he had not included such conditions in the present series of cases, even though they often preceded similar or nodular lesions in other parts of the body.

Brig. MacKenna had said that he considered that the superficial vesicles (harbouring gonococci) on the glans might be infected herpetic lesions. Dr. Harkness stated that on more than one occasion he had examined unruptured vesicles and that the aspirated contents had shown the presence of gonococci. Whether or not the inclusion bodies seen in the lesions of keratodermia blennorrhagica were the infective agent was a question which must be considered in the light of recent work. It had been proved by microdissection that the elementary bodies in molluscum and in fowl-pox (roup) were the infective agent, and this might be the case also in keratodermia blennorrhagica. Herzog and Fodor had regarded elementary bodies as changed forms of gonococci, but there was no evidence to support that contention.

Dr. Harkness was much interested in Col. Harrison's case of keratodermia blennorrhagica without urethritis and had mentioned in his address a similar case described by Lojander. He was particularly interested to hear from Col. Lees that the inoculum, in the successful inoculation experiments of Lees and Percival, had been the urethral discharge and not the cultured organisms.

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AURAL SYPHILIS

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This paper, contributed at the request of the Honorary Editor, is based on an address delivered in 1939 before the Section of Otology, Royal Society of Medicine. Matter in quotation marks is taken from the printed report of that address (Rodger[2]).

The burden of my theme on that occasion was the importance to the aural surgeon of being constantly on the alert for the presence of syphilis either causing or modifying the symptoms on account of which his advice is sought. It was suggested that there are two main reasons for such alertness. First, if an underlying syphilitic condition is present, the usual treatment for the symptoms complained of is likely to fail without the concurrent administration of antisyphilitic remedies. Even if the symptoms are due not exclusively to syphilis but to a more ordinary, perhaps a septic, condition occurring in a patient already the victim of syphilis, the "syphilitic terrain" will render the results of treatment uncertain. Secondly, and of even greater importance, if the symptoms which bring the patient to the aurist are syphilitic or are influenced by the presence of syphilis, then these symptoms constitute, just like the secondary rash or primary sore, a danger signal emitted by nature calling out for the recognition and treatment of the con-